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REMARKS

Claims 1-29 and 43-56 stand rejected. Claims 1, 3, 5, 6, 19, 32, 41, and 43 have been amended. Claims 4, 9, and 46-56 are canceled. New claims 57-81 have been added. With entry of this amendment, claims 30-42 remain withdrawn.

Claims 1-18 and 43-45 stand rejected under 35 U.S.C. 112, 1st paragraph.

In the previous Office action, the examiner suggested that the section 112 1st paragraph rejection to claim 1 can be overcome by amending the claim to include the elements of dependent claims 4 and 9. Claim 1 as amended includes the elements of claims 4 and 9. Therefore, applicant submits that claim 1 as amended satisfies the requirements of 35 U.S.C. 112, 1st paragraph. Given that claims 2-3, 5-8, 10-18, and 44-45 depend from claim 1 as amended, applicant submits that these claims satisfy the requirements of 35 U.S.C. 112, 1st paragraph. Applicant submits that claim 43 as amended satisfies the requirements of 35 U.S.C. 112, 1st paragraph. Given that new claims 67-81 depend from claim 43 as amended, applicant submits that these claims also satisfy 35 U.S.C. 112, 1st paragraph.

Claims 1-18 and 44-45 stand rejected under 35 U.S.C. 101.

Claim 1 has been amended to recite "classifying the first and second chromatograms based on the comparison result." Therefore, applicant submits that claim 1 as amended satisfies the requirements of 35 U.S.C. 101. Given that claims 2-3, 5-8, 10-18, and 44-45 depend from claim 1 as amended, applicants submit that these claims also satisfy the requirements of 35 U.S.C. 101.

Claims 1-29 and 43-56 stand rejected under 35 U.S.C. 112, 2nd paragraph.

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Claim 1 has been amended to recite "classifying the first and second chromatograms based on the comparison result." Therefore, applicant submits that claim 1 as amended satisfies the requirements of 35 U.S.C. 112, 2nd paragraph. Given that claims 2-3, 5-8, 10-18, and 44-45 depend from claim 1 as amended, applicants submit that these claims also satisfy the requirements of 35 U.S.C. 112, 2nd paragraph. Applicants submit that claim 43 as amended satisfies the requirements of 35 U.S.C. 112, 2nd paragraph. Given that new claims 67-81 depend from claim 43 as amended, applicant submits that these claims also satisfy 35 U.S.C. 112, 2nd paragraph. Applicant submits that claims 19-29 as amended satisfy the requirements of 35 U.S.C. 112, 2nd paragraph.

Claims 19-29 stand rejected under 35 U.S.C. 112, first paragraph.

The December 31, 2002 Office action stated that, under 35 U.S.C. 112, 1st paragraph, there are several factors to consider in determining whether undue experimentation is required to make and use the invention. The factors cited were a) the quantity of experimentation, b) the amount of information provided, c) the presence of working examples, d) the nature of the invention, e) the state of the prior art, f) the relative skill of those in the art, g) the predictability of the art, and h) the breadth of the claims. Applicant submits that claim 19 as amended satisfies the requirements of 35 U.S.C. 112, 1st paragraph, based on the disclosure as filed and further based on the eight factors cited in the December action, which are discussed as follows:

A. The quantity of experimentation needed to perform the functions of adjusting, reducing, and comparing data as disclosed by the application as filed and as recited in claim 19 as amended, is minimal. For computer software-related inventions, the requirements of 35 U.S.C. 112, 1st paragraph are satisfied by a disclosure of the functions of the software. "This is because, normally,

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writing code for such software is within the skill of the art, not requiring undue experimentation, once its functions have been disclosed." Fonar Corp. v. General Electric Co., 107 F.3d 1543.

B. The amount of information provided in the application as filed discloses the functions of claim 19 as amended. Writing a satisfactory program for implementing the functions of claim 19 as amended "is within the skill of the art, not requiring undue experimentation," because the "functions have been disclosed." Fonar, 107 F.3d 1543. Therefore, because a programmer of reasonable skill could write a satisfactory program with ordinary effort based on the disclosure, the enablement requirement is satisfied for claim 19 as amended. Northern Telecom v. Datapoint Corp., 908 F.2d 931.

C. The presence of working examples in the application as filed satisfies the enablement requirement. As long as the specification discloses at least one example for making and using the claimed invention, the enablement requirement is satisfied. In re Fisher, 427 F.2d 833. Failure to disclose other examples by which the claimed invention may be made does not render a claim invalid for lack of enablement. Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524.

D. The nature of the invention, which is related to computer science, is predictable. For inventions involving predictable factors, such as mechanical or electrical elements, a single embodiment provides broad enablement in the sense that, once imagined, other embodiments can be made without difficulty and their performance characteristics predicted by resort to known scientific laws. Ex Parte Hitzeman, 9 USPQ 1821 (CCPA 1987) and In re Fisher, 427 F.2d 833 (CCPA 1970).

E. The state of the prior art for data processing is predictable. The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. M.P.E.P. § 2164.01. For computer software-related inventions, the requirements of 35 U.S.C. 112, 1st paragraph

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are satisfied if a programmer of reasonable skill can write a satisfactory program with ordinary effort based on the disclosure. Northern Telecom v. Datapoint Corp., 908 F.2d 931.

F. The relative skill of those in the art allows skilled programmers to create software that processes digital data based on the functions disclosed in the specification as filed and recited in claim 19 as amended, because writing code for software "is within the skill of the art, not requiring undue experimentation," once its functions have been disclosed. Fonar Corp. v. General Electric Co., 107 F.3d 1543.

G. The predictability of the art, which is data processing, is high. In cases involving predictable factors, such as mechanical or electrical elements, a single embodiment provides broad enablement in the sense that, once imagined, other embodiments can be made without difficulty and their performance characteristics predicted by resort to known scientific laws. Ex Parte Hitzeman, 9 USPQ 1821 (CCPA 1987) and In re Fisher, 427 F.2d 833 (CCPA 1970).

H. The breadth of the claims is appropriate. The claims to an invention can be framed as broadly as possible in light of the prior art, and such claims can be properly based on a disclosure in the specification of but a single embodiment. AMI Industries, Inc. v. EA Industries, Inc., 204 USPQ 568, 588 (1979). Therefore, the invention recited in claim 19 as amended satisfies the enablement requirement based on the disclosure as filed, because the specification as filed discloses at least one embodiment of the invention of claim 19 as amended.

Therefore, applicants submits that claim 19 as amended satisfies the requirements of 35 U.S.C. 112, 1st paragraph. Given the fact that claims 20-29 depend from claim 19 as amended, applicant submits that these claims also satisfy the requirements of 35 U.S.C. 112, 1st paragraph.

New claim 57 has been added. Applicant respectfully submits that the art of record neither

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discloses nor suggests the combination of elements recited in newly added claim 57. Therefore, applicant submits that new claim 57 is patentable. Given that new claims 58-66 depend from new claim 57, applicant submits that these claims are also patentable.

On the basis of the above remarks, reconsideration and allowance of the claims is believed to be warranted and such action is respectfully requested. If the Examiner has any questions or comments, the Examiner is respectfully urged to contact the undersigned at the number listed below.

Respectfully submitted,

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Dated: 8/19/03

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